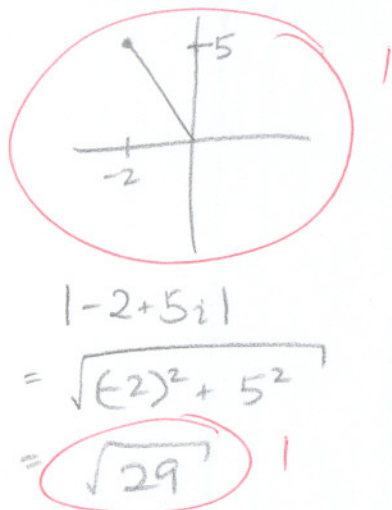


THIS IS A NO CALCULATOR QUIZ

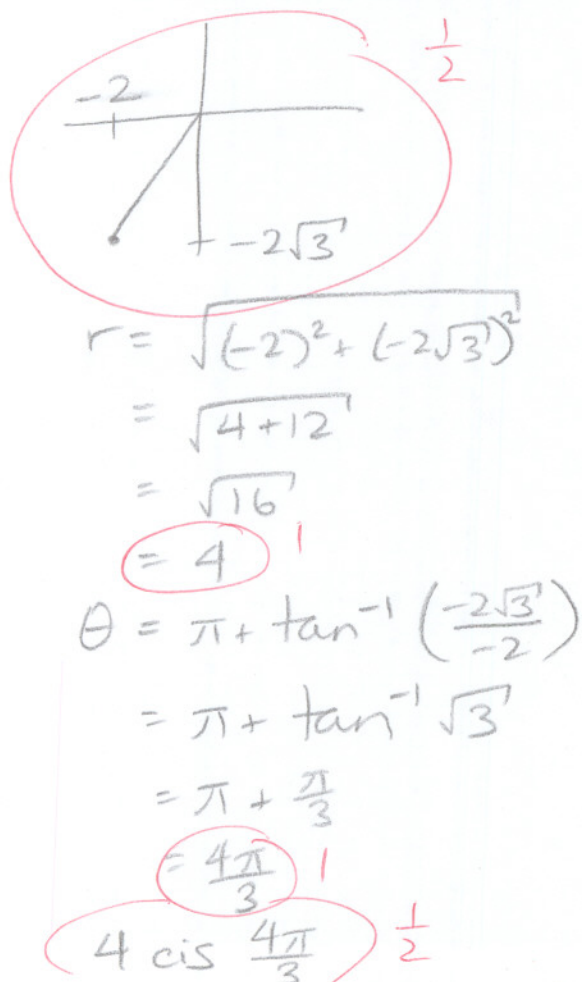
- [2 POINTS] Plot the complex number $-2 + 5i$ and find its absolute value.



- [2 POINTS] Find the standard form of the complex number $\sqrt{8} \operatorname{cis} \left(-\frac{\pi}{3} \right)$. SIMPLIFY YOUR ANSWER.

$$\begin{aligned}
 & \sqrt{8} \left(\cos \left(-\frac{\pi}{3} \right) + i \sin \left(-\frac{\pi}{3} \right) \right) \\
 &= \sqrt{8} \left(\frac{1}{2} - \frac{\sqrt{3}}{2} i \right) \\
 &= 2\sqrt{2} \left(\frac{1}{2} - \frac{\sqrt{3}}{2} i \right) \\
 &= \sqrt{2} - \sqrt{6} i
 \end{aligned}$$

- [3 POINTS] Represent the complex number $-2 - 2\sqrt{3}i$ graphically, and find its trigonometric form.



- [3 POINTS] Find the trigonometric form of the complex number $-7 + 4i$.

$$\begin{aligned}
 r &= \sqrt{(-7)^2 + 4^2} \\
 &= \sqrt{49 + 16} \\
 &= \sqrt{65} \\
 \theta &= \pi + \tan^{-1} \left(-\frac{4}{7} \right) \\
 &= \sqrt{65} \operatorname{cis} \left(\pi + \tan^{-1} \left(-\frac{4}{7} \right) \right)
 \end{aligned}$$